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FISHMEAL PRODUCTION AND EXPORTS DOWN SHARPLY IN 1973 SOME RECOVERY ANTICIPATED IN 1974

In calendar 1973, production of fishmeal in the major producer-exporter countries (Peru, Norway, South Africa, Chile, Denmark, and Iceland) is estimated at only 1.5 million metric tons, compared with 2 million tons in 1972 and 3.2 million in 1971. This year's indicated decline chiefly reflects the current expectations that Peru may not resume fishing this year.

In 1974, fishmeal production in the major producer-exporter countries is expected to recover to 2.3 million tons. The recovery is predicated on the assumption that Peru achieves its 6-million ton catch target. If fishmeal production in calendar 1974 does achieve such a partial recovery, exports from the major producer-exporter countries could approximate 2 million tons, compared with 1.2 million this year and 2.4 million in 1972. This increase in exports in calendar 1974 is equivalent to the protein fraction of 56 million bushels more soybeans, compared with this year's decline equivalent to 83 million bushels.

World production of fishmeal in calendar 1973 is estimated at 3.5 million tons—567,000 tons below the 1972 volume. This represents the third consecutive year of decline in production—to a volume which is nearly 1.9 million tons below the 1970 record and 2.1 million tons below the 1960-72 trend. In 1974, despite the fact that world fishmeal output is projected to expand to 4.4 million tons—chiefly reflecting the expected recovery in Peru, supplies will continue to be sharply below trend.

In Peru, the shortage of anchovies continues with fishmeal production amounting to less than 400,000 tons in the first half of calendar 1973, compared with about 843,100 tons in the same months of 1972. Following the July-August spawning period, ocean surveys will be made to determine the feasibility of resuming fishing in October. However, there is a strong possibility that full scale fishing may not be resumed until after the January-February 1974 spawn. The reported Peruvian anchovy catch target for calendar 1974 is 6 million tons. If achieved, production could approximate 1.2 million tons or 800,000 tons above this year's sharply reduced volume. Given this assumed partial recovery in output, exports in 1974 would be expected to approximate 1 million tons or perhaps 700,000 tons above this year's indicated volume.

According to technical reports the current anchovy scarcity reflects a warming of the water between the Chilean Coast and the Humbolt belt which runs about 100 miles off the Coast of Chile. This change apparently upset the environmental conditions necessary for reproduction of anchovies. The anchovies reportedly require an average temperature of 17° C or 63° F and the warm current increased the temperature. Also, the change in the current disturbed the plankton that the fish feed on causing the fish to move to greater depths.

The anchovy scarcity caused Peru to restrict fishing and exports in the last quarter of 1972. Peru's Sea Institute now reports that water temperatures have normalized. However, experts believe that it may take as long as 2 years before the Peruvian anchovy stock can be built back to a normal volume since fish stocks at the beginning of 1973 were reportedly less than one-fifth of normal.

Because of the scarcity, Peru's fishmeal output was substantially less than the volume committed for export and prices rose sharply. Consequently, the Government adopted a policy of honoring old export contracts with 30 percent of the exportable supply. The remaining 70 percent of exportable meal will be exported under new contracts at current prices.

On May 7, the Peruvian Government nationalized the fishmeal industry and established "Pescaperu"—a state owned company. This action was reportedly taken to consolidate and control industry planning and production. This could result in some reallocation of boat licenses to increase Peru's food fish industry. Already this year, Peru's food fish catch is targeted at 281,520 tons—30 percent above the 1972 volume. A slightly larger increase is targeted for 1974.

Chilean fishmeal production is also being restricted by abnormal ocean currents off the West Coast of South America. Although Chile's fishmeal production will likely recover in 1974 as the oceanographic phenomena normalize, future exports will be limited by increasing domestic feed requirements for the expanding poultry industry.

Other major fishmeal producer-exporters, such as Norway, South Africa, and Denmark have been

faced with catch restrictions and/or fish stock limitations and therefore have been unable to expand their output and capitalize on the current high prices.

U.S. supplies of fishmeal (production plus imports) during the January-June 1973 period dropped to only 100,400 metric tons—227,700 tons below the comparable period in 1972. Nearly 90 percent of the decline reflected a sharp drop in imports to only 21,000 tons, compared with 223,600 tons in the first half of 1972. However, production through June is also running one-sixth below the same period last year. The decline reflected unfavorable weather which hampered menhaden fishing. Also, heavy spring floods, particularly in the Gulf Coast area, drove fish into deep water further off shore. Although there have been reports that the anchovy stock off the California coast could be increasingly exploited to expand U.S. fishmeal production, the catch during the season ending May 15, 1973, amounted to only two-thirds of the allowable 100,000-metric ton quota. There appears to be little likelihood of any marked improvement in U.S. fishmeal supplies until Peruvian exports recover—perhaps beginning in the spring of 1974.

Under pressure of tight supplies, U.S. fishmeal prices c.i.f. East Coast ports have skyrocketed to an unprecedented high monthly average of $628 per metric ton in June dropping to $595 in July, compared with $201 a year earlier. Fishmeal is no longer commanding as high a price ratio relative to soybean meal as it did a year or two ago. During the January 1971-May 1973 period, monthly prices for imported fishmeal f.o.b. East Coast ports were positively correlated with 50 percent soybean meal prices Decatur basis as follows: The calculated fishmeal price was equal to the soybean meal price multiplied by a factor of 1.37 plus $45.50. In 2 months out of 3, the calculated price of fishmeal should turn out to be within $24.11 above or below the actual fishmeal price. More than 93 percent of the monthly variations in fishmeal price are explained by variations in the monthly price of soybean meal.

The sharp price rise this year is a reflection of reduced fishmeal supplies and below trend availabilities of all oilseeds and meals together with continued expansion in world demand for high protein feeds. Also there have been revaluations in the major importing countries, i.e. the European Community and Japan, as well as devaluations in the major protein exporters, the United States, Peru, and Brazil.

Fishmeal stocks held by the six member countries (Peru, Norway, South Africa, Chile, Iceland, and Angola) of the Fishmeal Exporters Organization (FEO) on April 30, 1973, were reported at about 580,000 tons—about 110,000 tons above the previous month but 465,000 tons below the same date a year earlier. The reduced level of stocks together with dim production prospects will severely limit imports into the major markets in calendar 1973.

Exports by the FEO countries during the January-April 1973 period declined to about 240,000 tons—780,000 tons below the same 4 months in 1972. The decline in exports for this period is equal to the protein fraction of 52 million bushels of soybeans. Interestingly, production by the FEO countries during the January-April period amounted to 770,000 tons—only 350,000 tons below the comparable volume for the same months in 1972. During the January-April 1972 period stocks were being depleated from the relatively large volume of more than 1 million tons on January 1, 1972. This is in sharp contrast with the January-April 1973 period when the FEO countries were replenishing stocks from the low volume of less than 200,000 tons on January 1, 1973.

The world fish catch as reported by the Food and Agricultural Organization (FAO) trended upward by 2.58 million tons per year during the 1964-71 period. About 58 percent of the trendline increase, or 1.49 million tons, was used for extraction of meal and oil. However, the indicated meal extraction rate declined from 21.7 percent in 1964 to 20.5 percent in 1971.

According to FAO, the aggregate volume of fish processed into meal in calendar 1971 was reported at 25.2 million tons—5 percent below the 1970 level. Although complete 1972 data are not yet available, another decline of perhaps even greater magnitude in 1972 is evidenced by the 5.9-million ton decline in the Peruvian anchovy catch. Based on present conditions, it seems doubtful whether Peru will ever exceed the 12.4-million ton catch achieved in 1970.

Annual aggregate world fish catch data as published by FAO through 1970 indicate that expansion of the fish reduction industry far outpaced the

growth in fish for human consumption. However, in view of the current shortage of industrial-type fish for reduction into meal, as well as the current high prices for food protein, some reallocation of catching equipment may take place in the future.

In view of the above factors it would appear that fishmeal production and exports in the 1970's will not be able to maintain the trendline growth of the 1960's. Annual growth and deviations from the 1960-72 period in 1,000 metric tons are as follows:

Item and year	Major producer-exporters		World	
	Production	Exports	Production	Exports
Deviations from 1960-72 trend:				
Standard error	±495	±366	±466	±360
1970	+421	-102	+509	-92
1971	+35	-251	+85	-274
1972	-1,315	-639	-1,283	-627
1973	-1,974	-1,969	-2,156	-2,038
1974	-1,281	-1,296	-1,418	-1,352
Change from previous year:				
1960-72 trend	+ 153	+ 146	+ 246	+ 164
1970	+ 607	- 14	+ 714	- 37
1971	- 233	- 3	- 178	- 19
1972	-1,198	- 241	-1,121	- 188
1973	- 506	-1,244	- 567	-1,247
1974	+845	+ 835	+970	+850

Fishmeal: Production and exports by major producer-exporters and world, annual 1960-73 and forecast 1974

(In 1,000 metric tons)

Item and year	Peru	Norway	South Africa	Chile	Denmark	Iceland	Total	Other	World
Production 1/:									
1960	530	141	133	43	51	54	952	1,054	2,006
1961	864	152	170	58	58	69	1,371	1,110	2,481
1962	1,121	109	193	94	88	100	1,705	1,121	2,826
1963	1,159	138	247	108	96	91	1,839	1,029	2,868
1964	1,552	179	263	175	112	126	2,407	1,175	3,582
1965	1,282	283	277	93	113	174	2,222	1,303	3,525
1966	1,471	422	270	218	125	176	2,682	1,378	4,060
1967	1,816	494	356	162	176	112	3,116	1,433	4,549
1968	1,922	404	468	235	244	53	3,326	1,643	4,969
1969	1,611	310	404	177	247	61	2,810	1,824	4,634
1970	2,253	352	303	197	245	67	3,417	1,929	5,346
1971	1,935	384	273	263	265	64	3,184	1,984	5,168
1972 2/	897	376	244	125	270	74	1,986	2,061	4,047
1973 3/	400	340	280	80	280	100	1,480	2,000	3,480
1974 4/	5/1,200	350	275	120	275	105	2,325	2,125	4,450
Exports 1/:									
1960	507	102	127	18	32	55	841	123	964
1961	708	128	169	47	43	72	1,167	140	1,307
1962	1,056	60	207	72	62	71	1,528	138	1,666
1963	1,160	104	214	87	68	102	1,735	128	1,863
1964	1,417	183	280	146	70	124	2,220	173	2,393
1965	1,260	260	233	67	81	141	2,042	172	2,214
1966	1,304	258	173	183	82	153	2,153	205	2,358
1967	1,592	495	289	103	102	133	2,714	194	2,908
1968	2,083	436	353	167	184	62	3,285	242	3,527
1969	1,656	302	314	145	169	66	2,652	314	2,966
1970	1,873	249	184	100	170	62	2,638	291	2,929
1971	1,750	319	118	200	188	60	2,635	275	2,910
1972 2/	1,528	382	143	78	189	74	2,394	328	2,722
1973 3/	300	325	175	50	200	100	1,150	325	1,475
1974 4/	1,100	325	175	80	200	105	1,985	340	2,325

1/ Includes fish solubles, dry weight basis, where separately classified.
2/ Preliminary.
3/ Partly estimated.
4/ Forecast.
5/ Based on assumed resumption of Peruvian fishing in March 1974 and an official planned catch target of 6 million tons with an assumed extraction rate of 20 percent.

Fishmeal 1/: Production from selected countries, annual 1965-73
(In 1,000 metric tons)

Continent and country	1965	1966	1967	1968	1969	1970	1971 2/	1972 2/	1973 2/
North America:									
Canada	87.7	87.2	89.4	122.4	127.3	112.3	91.0	72.0	
United States	273.3	240.2	224.5	244.9	265.4	295.0	307.0	309.6	
Mexico	7.1	9.6	10.2	11.4	14.9	15.0	17.0	17.0	
Other	5.7	11.5	11.6	8.9	1.6	8.0	8.0	8.0	
Total	373.8	348.5	335.7	387.6	409.2	430.3	423.0	406.6	350.0
South America:									
Argentina	15.8	22.1	26.5	18.6	15.6	13.1	13.2	14.0	
Chile	93.1	217.7	161.8	234.9	176.8	196.7	263.0	125.0	80.0
Peru	1,282.0	1,470.5	1,816.0	1,922.0	1,611.0	2,253.0	1,935.0	897.0	400.0
Other	6.9	10.1	13.1	13.5	18.4	20.5	22.1	22.1	
Total	1,397.8	1,720.4	2,017.4	2,189.0	1,821.8	2,483.3	2,233.3	1,058.1	520.0
Europe:									
Denmark	112.6	124.5	176.4	243.9	247.3	245.1	265.0	270.0	280.0
France	13.2	13.6	13.2	14.0	14.0	19.0	19.0	19.0	
Germany, West	80.4	79.2	84.0	81.9	78.4	72.3	72.5	80.0	
Iceland	173.9	175.9	111.5	53.2	60.9	67.2	63.9	74.0	100.0
Netherlands	5.9	9.6	8.4	5.0	7.2	7.5	7.0	7.0	
Norway	283.3	422.3	493.6	403.6	310.4	352.3	383.8	375.5	340.0
Portugal	8.0	10.9	7.0	6.8	11.2	14.0	15.0	15.0	
Spain	34.1	33.9	33.1	37.1	42.8	45.0	40.0	45.0	
Sweden	6.4	6.9	7.0	8.0	6.8	7.0	7.0	7.0	
United Kingdom	86.3	87.4	81.2	88.4	85.0	84.0	90.0	87.0	
Poland	20.3	20.3	21.4	25.0	26.2	28.5	50.5	50.0	
Other	10.1	17.0	20.7	20.0	24.0	24.3	23.9	23.4	
Total	834.5	1,001.5	1,057.5	986.9	914.2	966.2	1,037.6	1,052.9	1,045.0
USSR (Europe and Asia)	237.0	265.0	325.0	348.0	374.0	395.0	427.2	450.0	475.0
Africa:									
Morocco 3/	7.5	37.1	25.3	38.2	27.5	30.0	20.0	20.0	
Angola	46.9	48.1	41.5	54.7	89.6	67.4	63.0	130.0	
South Africa 4/	276.5	270.0	355.7	467.7	404.4	303.2	272.7	244.0	280.0
Other	.8	1.3	1.6	1.7	1.7	1.7	1.7	1.7	
Total	331.7	356.5	424.1	562.3	523.2	402.3	357.4	395.7	430.0
Asia:									
Australia	0.8	0.8	0.8	0.8	1.0	1.8	2.0	2.0	
Japan	341.2	358.8	409.3	483.6	578.9	655.3	675.7	670.0	
Other	8.8	8.7	9.4	10.7	11.7	11.7	11.7	11.7	
Total	350.8	368.3	419.5	495.1	591.6	668.8	689.4	683.7	660.0
Grand total	3,525.3	4,060.2	4,579.2	4,968.9	4,634.0	5,345.9	5,167.9	4,047.0	3,480.0

1/ Includes solubles, dry weight basis, where separately classified. 2/ Preliminary. 3/ Exports. 4/ Includes South West Africa and production from factory ships.

Foreign Agricultural Service. Prepared or estimated on the basis of official statistics of foreign governments, other foreign source materials, reports of U.S. Agricultural Attaches and Foreign Service Officers, results of office research and related information.

Peruvian Fishmeal: Estimated supply and distribution

Calendar year	Fish catch	Meal extraction rate	Production	Stocks Jan. 1	Supply	Apparent domestic consumption	Exports	Average annual price 1/
	1,000 metric tons	Percent	1,000 metric tons	1,000 metric tons	1,000 metric tons	1,000 metric tons	1,000 metric tons	U.S. dollars/ m.t.
1965	7,242	17.7	1,282	260	1,542	44	1,260	110.0
1966	8,530	17.3	1,471	238	1,709	29	1,305	139.5
1967	9,825	18.5	1,816	375	2,191	30	1,561	109.0
1968	10,263	18.7	1,922	600	2,522	48	2,083	100.8
1969	8,960	18.0	1,611	391	2,002	39	1,656	119.2
1970	12,383	18.2	2,253	307	2,560	33	1,873	157.2
1971	10,274	18.8	1,935	654	2,589	51	1,752	154.6
1972	4,447	20.2	897	786	1,683	95	1,528	144.0
1973 2/	2,000	20.0	400	60	460	100	300	3/ 360.0
1974 4/	6,000	20.0	1,200	60	1,260	100	1,000	(5/)

1/ F.O.B. Peruvian ports.
2/ Partly estimated. Assumes that fishing will not be resumed until March 1974.
3/ Price as of April 30.
4/ Forecast based on the 1974 catch target of 6 million tons of anchovies.
5/ Not available.

Compiled from Sociedad Nacional de Pesqueria and other sources.

Peru's Production and Exports of Fishmeal
Monthly Calendar Years 1968-73

(In 1,000 metric tons)

Month	Production						Exports					
	1968	1969	1970	1971	1972	1973	1968	1969	1970	1971	1972	1973
January...	284.0	240.5	362.9	23.5	6.0	5.7	192.1	140.3	173.4	98.6	203.5	2.0
February..	191.6	17.4	192.5	28.8	35.7	4.3	188.2	185.9	221.3	96.6	190.2	1.1
March.....	155.2	325.5	199.2	456.3	349.4	248.9	170.1	188.2	216.9	89.5	154.8	0
April.....	212.1	240.8	366.7	287.0	309.6	93.2	167.0	195.9	187.8	141.2	191.0	4.5
May.....	190.3	169.3	178.7	129.4	109.8	10.9	171.3	208.1	202.7	127.4	184.6	
June.....	.9	12.1	32.3	18.5	32.6		199.1	163.7	140.3	113.2	215.7	
July.....	14.8	5.6	5.5	2.2	2.1		167.4	152.0	200.1	141.6	117.0	
August....	17.7	1.9	2.6	2.3	1.6		105.2	88.2	117.3	111.6	128.1	
September.	257.4	97.9	258.9	225.7	3.2		118.4	46.1	95.3	229.4	113.4	
October...	247.7	110.9	272.4	265.5	2.8		165.6	80.2	56.2	141.7	25.3	
November..	183.9	77.7	211.5	229.2	15.7		217.4	106.7	113.9	210.5	3.8	
December..	166.4	311.2	170.2	266.3	28.5		221.4	100.3	147.6	250.3	.8	
Total...	1,922.0	1,610.8	2,253.4	1,934.7	897.0		2,083.2	1,655.6	1,872.8	1,751.6	1,528.2	

Source: Ministeria de Pesqueria.

Fishmeal 1/: Exports from specified countries
annual 1964-72
(In 1,000 metric tons)

Continent and country of destination	1964	1965	1966	1967	1968	1969	1970	1971	1972 2/
North America:									
Canada	58	54	49	48	64	73	73	63	33
Greenland	1	2	2	2	3/ 3	3/ 3	3/ 3	3/ 3	3/ 2
Panama	2	5	10	9	9	2	5	6	7
Total	61	61	61	59	76	78	81	72	42
South America:									
Argentina	2	2	1	2	1	1	1	(4/)	(4/)
Chile	146	67	183	103	167	145	100	200	78
Peru	1,417	1,260	1,304	1,592	2,083	1,656	1,873	1,750	1,528
Total	1,565	1,329	1,488	1,697	2,251	1,802	1,974	1,950	1,606
Europe:									
Belgium-Luxembourg	3	5	2	1	(4/)	1	1	1	1
France	2	5	6	4	4	2	5	11	7
Germany, West	5/ 7	5/ 8	2	2	8	15	21	44	41
Italy	0	(4/)	(4/)	(4/)	(4/)	0	(4/)	(4/)	(4/)
Netherlands	7	10	4	1	15	32	37	9	27
Total EC	19	28	14	8	27	50	64	65	76
Denmark 6/	70	81	82	102	184	169	170	188	189
Faroe Islands	1	3	6	11	13	12	14	16	15
Iceland	124	141	153	133	62	66	62	60	74
Norway	183	260	258	495	436	302	249	319	382
Portugal	4	2	4	4	8	8	7	6	9
Sweden	(4/)	(4/)	1	1	(4/)	(4/)	2	2	0
Total Europe	401	515	518	754	730	607	568	656	745
USSR (Europe and Asia)	4	7	12	36	28	27	12	10	15
Africa:									
Angola	54	48	54	37	44	92	62	47	124
Morocco	22	8	37	25	38	28	23	19	18
South Africa 6/ 7/	280	233	173	289	8/ 353	8/ 314	8/ 184	118	143
Total	356	289	264	351	435	434	269	184	285
Asia:									
Japan	6	13	15	11	7	18	25	38	29
Grand total	2,393	2,214	2,358	2,908	3,527	2,966	2,929	2,910	2,722

1/ Includes solubles and similar products. 2/ Preliminary. 3/ Estimated. 4/ Less than 500 tons. 5/ Including small quantities of meat meal. 6/ Including solubles dry meal basis. 7/ Including the production of South West Africa. 8/ Fishmeal exporters organization estimates, includes export sales from factory ships.

Foreign Agricultural Service. Prepared or estimated on the basis of official statistics of foreign governments, other foreign source materials, reports of U.S. Agricultural Attaches and foreign Service Officers, results of office research and related information.

Fishmeal 1/: Imports into specified countries, annual 1964-72
(In 1,000 metric tons)

Continent and country of source	1964	1965	1966	1967	1968	1969	1970	1971	1972 2/
North America:									
Canada	4	(3/)	(3/)	1	2	1	(3/)	(3/)	1
Mexico	35	32	49	52	71	70	78	104	70
United States	401	248	408	593	777	325	229	257	356
Total	440	280	457	646	850	396	307	361	427
South America:									
Brazil	4	(3/)	2	6	8	9	7	(4/) 6	(4/) 6
Colombia 5/	3	6	7	3	(4/) 4	4	5	(4/) 4	(4/) 4
Venezuela	19	14	16	25	30	26	27	32	12
Total	26	20	25	34	42	39	39	42	22
Europe:									
Belgium-Luxembourg	69	70	73	80	96	99	95	97	89
France	105	99	91	99	107	105	95	67	85
Germany, West	392	406	361	6/ 479	6/ 540	6/ 551	6/ 515	6/ 530	6/ 509
Italy	92	89	96	103	111	115	114	100	120
Netherlands	182	171	138	146	186	196	134	130	160
Total EC	840	835	759	907	1,040	1,066	953	924	963
Austria	36	38	38	46	51	54	57	56	52
Denmark	36	32	37	22	8	31	19	20	21
Finland	6	20	21	26	41	44	41	46	46
Greece 5/	13	16	18	18	10	12	10	13	15
Ireland	10	13	11	17	20	26	23	12	17
Portugal 5/	7	7	10	14	19	23	24	22	32
Spain	41	92	100	107	113	141	117	99	122
Sweden	40	45	50	57	73	80	75	79	77
Switzerland 5/	38	46	30	38	57	68	71	73	82
United Kingdom	367	361	309	400	499	468	393	328	393
Total West Europe	1,434	1,505	1,383	1,652	1,931	2,013	1,783	1,672	1,820
Bulgaria	2	15	20	14	9	10	21	29	14
Czechoslovakia	61	73	67	75	75	83	104	114	95
Germany, East 7/	34	78	73	67	81	80	89	194	46
Hungary	29	35	28	33	48	53	60	80	60
Poland	56	63	67	85	108	123	126	115	166
Romania 7/	6	6	4	1	1	2	8	18	14
Yugoslavia	34	27	41	39	48	55	119	70	53
Total East Europe	222	297	300	314	370	406	527	620	448
Total Europe	1,656	1,802	1,683	1,966	2,301	2,419	2,310	2,292	2,268
Africa:									
Rhodesia	5	5	(8/)	(8/)	(8/)	(8/)	(8/)	(8/)	(8/)
Zambia	1	2	2	2	3	5	5	4/ 5	4/ 5
Total	6	7	2	2	3	5	5	5	5
Asia:									
Israel 5/	11	10	13	11	15	22	24	15	4/ 15
Japan	102	113	96	87	150	108	95	22	57
Malay States	5	7	11	10	14	12	12	9	12
Singapore	20	23	22	23	43	34	34	33	42
Philippines	9	9	8	13	21	12	10	11	12
Total	147	162	150	144	243	188	175	90	138
Oceania:									
Australia 9/	8	11	12	14	28	30	27	32	81
Grand total	2,283	2,282	2,329	2,806	3,467	3,077	2,863	2,822	2,941

1/ Includes fish solubles, dry weight basis where separately classified in import statistics. 2/ Preliminary. 3/ Less than 500 tons. 4/ Estimated. 5/ Includes small amounts of meat meal. 6/ Includes fish and whale solubles, dry weight basis. 7/ Based on Peruvian exports. 8/ Not available. 9/ Year ending June 30.

WORLD SUNFLOWERSEED OUTPUT EXPECTED TO RECOVER IN 1973

In 1973 world sunflowerseed production is expected to increase to 9.9 million metric tones—1. million above the reduced 1972 volume. The recovery, if it materializes, will follow 3 successive years of declining output. The indicated increase will materialize if: (1) Soviet output recovers to 5.5 million tons, based on an assumed average yield; (2) assumed trendline output in Eastern Europe occurs, based on more favorable growing conditions and some acreage expansion. The Soviet sunflower crop is reportedly doing quite well as of the first part of August.

The net increase in sunflowerseed already harvested in the first half of 1973 in the Southern Hemisphere was 72,700 tons above the 1972 volume. This increase could be roughly offset by indications of reduced U.S. output. If sunflowerseed production does reach the indicated volume this year, oil availabilities from the major producer-exporter countries will increase by roughly 450,000 tons, compared with a 200,000-ton decline this year. In 1974 meal availabilities in the major producer-exporter countries will increase by about 400,000 tons following an estimated 155,000-ton decline this year.

World sunflowerseed production declined by 4.2 percent in calendar 1972 to 8.9 million metric tons. The major reasons for the drop in production were: (1) An 11 percent or 0.6 million ton reduction in sunflowerseed output in the Soviet Union where acreage and yields were both below the 1971 levels; and (2) a decline in output in Yugoslavia and Hungary due to lower yields and somewhat less acreage. However, Romania, Bulgaria, Australia, and the United States did have larger outturns than in 1971.

Sunflower oil output in 1973 is calculated at 2.76 million tons for the four major producer-exporter countries (the Soviet Union, Romania, Bulgaria, and Argentina). This is 0.19 million tons less than 1972 sunflower oil output and is the fifth year of declining oil output.

On the meal side, 1973 output by the major producer-exporters is estimated at 2.7 million tons, 5 percent below the 1972 volume. Turkey is included as a major producer-exporter of meal. Meal and oil production for 1973 is calculated on the basis of the volume of the seed harvested in the fall of 1972 in Northern Hemisphere countries and in early 1973 in countries in the Southern Hemisphere and using assumed average percentages for crush, meal, and oil extractions.

State vegetable oil production in the Soviet Union for the September 1972 through May 1973 period was 2.01 million tons—a 137,000-ton decline from the same 9 months a year ago. The total calculated shortfall for Soviet sunflower oil output from the reduced 1972 crop is about 240,000 tons.

Sunflower oil exports from the major producer countries in 1973 are estimated to be 495,000 tons or 4 percent below the 1972 volume. Argentina, which had almost no exports last year, is the only country forecast to expand oil exports above last year. In June, the Argentine Government put a 60,000-ton limit on sunflower oil exports in calendar 1973.

Exports of sunflowerseed and meal from the major producer-exporters are forecast at 500,000 tons in 1973. The rise of 23 percent or 95,000 tons is due to an increase of 24 percent in Argentina's sunflower meal exports, a 6-percent rise in Turkish meal exports along with increased seed exports from Bulgaria and Romania.

In 1972 the largest importers of sunflowerseed were West Germany, France, Italy, and Japan and of sunflower oil, West Germany, France, the Netherlands, and Belgium-Luxembourg. Imports of seed and oil (oil basis) by all the major importers rose by 13 percent or 61,200 tons above the 1971 volume. The increase reflected heavy increases in exports from minor producing countries such as the United States and Australia.

Sunflowerseed: 1/ Production in specified countries and the world, annual 1967-72 and forecast 1973

(In 1,000 metric tons)

Continent and country	1967	1968	1969	1970	1971	1972 2/	Indicated 1973
North America:							
Mexico	---	---	---	---	20.0	15.0	---
United States	101.6	70.6	77.7	84.7	185.0	287.4	---
Canada	16.3	11.2	15.4	25.1	77.0	77.0	---
Total	117.9	81.8	93.1	109.8	282.0	379.4	300
South America:							
Argentina	1,120.0	940.0	876.0	1,140.0	830.0	828.0	880
Chile	33.3	43.0	28.2	28.0	20.3	20.0	---
Uruguay	76.0	48.6	62.5	64.9	48.8	59.8	85
Other	11.5	6.0	14.3	20.0	18.0	18.0	---
Total 3/	1,240.8	1,037.6	981.0	1,252.9	917.1	925.8	1,000
Europe:							
France	21.1	29.9	32.5	49.1	55.0	60.0	65
Spain	20.6	30.5	153.2	160.4	256.0	243.0	265
Bulgaria	477.6	456.0	541.0	407.0	455.0	483.0	525
Hungary 4/	79.1	93.5	108.0	81.0	152.0	132.0	---
Romania 4/	719.8	729.9	746.9	769.6	791.0	848.0	875
Yugoslavia	250.0	309.0	390.0	264.0	347.0	277.0	---
Other	10.7	11.0	8.2	12.3	18.8	22.5	---
Total 3/	1,578.9	1,659.8	1,979.8	1,743.4	2,074.8	2,065.5	2,175
USSR 5/	6,079.0	6,150.0	5,849.0	5,652.0	5,200.0	4,627.6	8/5,500
Africa:							
Ethiopia	34.0	38.0	40.0	40.0	40.0	40.0	---
Morocco	1.4	3.7	2.8	18.0	16.0	24.0	---
Kenya 6/	3.0	3.0	3.0	2.0	2.0	2.0	---
Mozambique 6/	2.0	2.4	2.5	4.1	6.0	6.0	---
Tanzania 6/	5.8	7.7	7.7	8.0	8.0	8.0	---
South Africa	104.3	84.3	88.5	100.0	131.0	151.0	207
Other	5.2	4.9	5.6	5.2	5.2	5.2	---
Total 3/	155.7	144.0	150.1	177.3	208.2	236.2	300
Asia:							
Turkey	230.0	230.0	310.0	375.0	465.0	470.0	500
Other	72.2	73.2	75.8	73.1	73.5	73.5	---
Total 7/	302.2	303.2	385.8	448.1	538.5	543.5	575
Oceania:							
Australia	1.9	3.2	5.5	13.2	58.9	147.5	90
World total	9,476.4	9,379.6	9,444.3	9,396.7	9,279.5	8,925.5	9,940

1/ Southern Hemisphere sunflower crops which are harvested early in the calendar year are combined with those of the Northern Hemisphere which are harvested in the latter months of the same year. 2/ Preliminary. 3/ Includes estimates for minor producing countries. 4/ Includes production from inter-cropping. 5/ Adjusted official estimates that is official Soviet data "barn yield" less 8 percent dockage. 6/ Commercial crop only. 7/ Includes estimates for Mainland China as well as for minor producing countries. 8/ Projected on the basis of an estimated 11.4 million acres and an assumed average yield of 1,065 pounds per acre.

Foreign Agricultural Service. Prepared or estimated on the basis of official statistics of foreign governments, other foreign source material, reports of U.S. Agricultural Attaches and Foreign Service Officers, results of office research and related information.

Sunflowerseed and Oil: Production and exports by major producer-exporters, annual 1960-73
(In 1,000 metric tons)

Item and year	USSR		Romania		Bulgaria		Argentina		Total as oil
	Seed	Oil	Seed	Oil	Seed	Oil	Seed	Oil	
Production: 1/									
1960	2,795	1,009	529	185	279	97	802	184	1,475
1961	3,650	1,332	522	184	344	121	585	135	1,772
1962	4,373	1,641	481	175	301	109	860	277	2,202
1963	4,411	1,684	450	166	357	132	462	149	2,131
1964	3,942	1,539	506	191	336	127	460	148	2,005
1965	5,573	2,245	518	202	337	131	757	244	2,822
1966	5,013	2,033	564	222	357	140	782	252	2,647
1967	5,658	2,338	671	269	423	169	1,120	361	3,137
1968	6,079	2,576	720	295	478	196	940	303	3,370
1969	6,150	2,559	730	294	456	184	876	282	3,319
1970	5,849	2,417	747	299	541	217	1,140	367	3,300
1971	5,652	2,368	770	312	407	165	830	267	3,112
1972 2/	5,200	2,174	791	320	455	184	828	267	2,945
1973 2/	4,628	1,934	848	343	483	195	880	284	2,756
1974 3/	5,500	2,299	875	362	525	218	1,000	323	3,202
Exports: 4/									
1960	28	92	5	32	31	9	--	14	211
1961	32	122	15	34	17	11	--	31	262
1962	43	152	6	48	37	10	--	15	311
1963	40	237	6	40	13	13	--	4	353
1964	45	169	16	37	46	3	--	31	347
1965	35	221	15	33	39	1	--	35	379
1966	60	428	21	77	66	--	--	78	730
1967	132	670	29	110	58	8	--	81	1,088
1968	161	714	19	116	51	21	--	80	1,162
1969	151	656	18	144	52	42	--	7	1,070
1970	62	351	29	119	30	30	--	101	722
1971	37	379	10	132	20	39	--	36	653
1972 2/	31	290	6	130	20	37	--	1	515
1973 3/	(250)		(165)		(20)		--	(60)	495

1/ Total harvested in previous calendar year except Argentina where harvested in the year indicated. Oil production for the USSR estimated on the basis of 95 percent of the seed harvest adjusted for 8 percent dockage assumed extraction rates of 38 to 45 percent. Oil production for all other countries estimated on the basis 92 percent of seed harvested using average oil extraction rates of 25 to 35 percent. 2/ Preliminary. 3/ Forecast. 4/ Exports of seed expressed as oil using assumed extraction rates as indicated.

Sunflowerseed: Production and exports by major producer-exporters
annual 1960-73
(In 1,000 metric tons)

Item and year	USSR		Argentina		Turkey		Bulgaria		Romania		Total as meal
	Seed	Meal	Seed	Meal	Seed	Meal	Seed	Meal	Seed	Meal	
Production: 1/											
1960	2,795	1,195	802	332	140	58	279	115	529	219	1,919
1961	3,650	1,547	585	242	100	41	344	141	522	214	2,185
1962	4,373	1,807	860	356	75	31	301	120	481	193	2,507
1963	4,411	1,793	462	191	55	23	357	140	450	177	2,324
1964	3,942	1,569	460	190	82	34	336	129	506	195	2,117
1965	5,573	2,149	757	313	160	66	337	126	518	194	2,848
1966	5,013	1,891	782	324	160	66	357	130	564	206	2,617
1967	5,658	2,086	1,120	464	200	83	423	151	671	240	3,024
1968	6,079	2,223	940	389	230	95	478	169	720	255	3,131
1969	6,150	2,232	876	363	230	95	456	160	730	257	3,107
1970	5,849	2,112	1,140	472	310	128	541	189	747	261	3,162
1971	5,652	2,040	830	344	375	155	407	142	770	269	2,950
1972 2/	5,200	1,877	828	343	465	193	455	159	791	277	2,849
1973 2/	4,628	1,670	880	365	470	194	483	169	848	296	2,694
1974 3/	5,500	1,986	1,000	414	500	207	525	184	875	306	3,097
Exports: 4/		(5/)				(6/)					
1960	33	248	--	218	3	51	37	--	6	--	596
1961	38	193	--	249	--	48	19	--	17	--	564
1962	47	174	--	255	--	45	14	--	7	--	542
1963	42	97	--	217	--	27	14	--	6	--	403
1964	46	23	--	181	--	47	47	--	17	--	361
1965	34	65	--	276	1	62	37	--	14	--	489
1966	56	195	--	372	--	87	62	--	20	--	792
1967	118	194	--	399	--	104	52	--	26	--	893
1968	139	163	--	379	--	85	44	--	16	--	826
1969	132	130	--	291	--	80	45	--	15	--	693
1970	54	24	--	404	--	77	26	--	24	--	609
1971	32	10	--	299	--	84	17	--	9	--	451
1972 2/	27	2	--	241	--	113	17	--	5	--	405
1973 3/	25	--	--	300	--	120	25	--	30	--	500

1/ Total seed harvested in previous calendar year except Argentina where harvested in the year indicated. Meal production for USSR estimated on the basis of 95 percent of the seed harvest adjusted for 8 percent dockage and assumed extraction rates of 38 to 45 percent (hulled basis). Meal production for all other countries estimated on the basis of 92 percent of seed harvested using an average extraction rate of 45 percent. 2/ Preliminary. 3/ Forecast. 4/ Exports of seed expressed as meal using assumed extraction rates as indicated. 5/ Estimated at about 50 percent of the total volume of vegetable cake and meal exports which are not separately classified. 6/ Total vegetable cake and meal exports less exports of cottonseed meal. Includes small quantities of other cakes and meal.

Imports of sunflowerseed and oil
into major importing countries,
calendar year 1971 and 1972
(In metric tons)

Imports / From	Sunflowerseed: USSR	Bulgaria	Hungary	Romania	Others	Total	Sunflowerseed oil: Argentina	USSR	Hungary	Romania	Others 1/	Total
1971												
Into:												
Belgium-Luxembourg	0	230	58	0	1,177	1,465	3,188	15,379	0	6,334	7,969	32,870
France	0	15,830	444	0	845	17,119	7,705	24,102	0	3,547	39,784	75,138
Germany, West	0	10,221	16,149	1,571	20,608	48,549	8,166	74,040	209	44,347	13,340	140,102
Italy	1,087	14,281	84	13,194 2/	48,201	76,847	343	0	0	87	950	1,380
Netherlands	0	0	60	43	2,547	2,650	9,082	17,035	0	5,205	2,490	33,812
Total EC	1,087	40,562	16,795	14,808	73,378	146,630	28,484	130,556	209	59,520	64,533	283,302
Austria 3/	26	1,518	2,841	139	2,869	7,393	1,151	1,149	3,682	15,648	2,475	24,105
Denmark	0	0	0	0	497	497	1,589	597	0	424	226	2,836
Poland	(4/)	(4/)	(4/)	(4/)	4,900	4,900	(4/)	11,780	(4/)	(4/)	9,230	21,010
Spain	(4/)	(4/)	(4/)	1	101	102	1,138	0	0	0	179	1,317
Sweden	0	0	53	0	2,599	2,652	0	0	0	265	2,897	3,162
United Kingdom	0	0	0	0	0	0	258	7,572	0	980	15,096	23,906
Yugoslavia	500	0	100	0	16	616	0	0	0	0	4,327	4,327
Morocco	0	0	0	0	0	0	0	4,191	0	0	0	4,191
Japan	0	3,167	0	7,679	26,270	37,116	0	0	0	0	1	1
Total	1,613	45,247	19,789	22,627	110,630	199,906	32,620	155,845	3,891	76,837	98,964	368,157
1972												
Belgium-Luxembourg	0	175	137	0	1,056	1,368	0	8,434	0	2,639	30,513	41,586
France	0	21,267	959	0	31,234	53,460	0	22,205	0	8,353	31,980	62,538
Germany, West	0	4,000	14,333	3,141	97,750	119,224	100	79,336	360	45,615	20,851	146,262
Italy	0	18,010	0	0	33,620	51,630	0	0	832	0	1,483	2,315
Netherlands	0	0	35	0	5,898	5,933	0	21,421	0	14,690	9,703	45,814
Total EC	0	43,452	15,464	3,141	169,558	231,615	100	131,396	1,192	71,297	94,530	298,515
Austria 3/	59	947	1,966	243	2,082	5,297	92	1,372	12,557	11,580	279	25,880
Denmark	0	0	0	0	681	681	815	500	0	321	1,111	2,747
Poland	(4/)	(4/)	(4/)	(4/)	4,000	4,000	(4/)	(4/)	(4/)	(4/)	10,000	10,000
Spain	(4/)	(4/)	(4/)	(4/)	11,283	11,283	(4/)	(4/)	(4/)	(4/)	5,525	5,525
Sweden	0	0	0	0	2,802	2,802	0	(5/)	0	502	344	846
United Kingdom	0	0	0	0	0	0	0	10,608	0	2,309	15,873	28,790
Yugoslavia	(4/)	(4/)	(4/)	(4/)	1,500 6/	1,500	0	0	0	0	0	6/ 0
Morocco	0	0	0	0	0	0	(4/)	(4/)	(4/)	(4/)	18,600	18,600
Japan	0	0	0	0	28,460	28,460	0	0	0	0	0	0
Total	59	44,399	17,430	3,384	220,366	285,638	1,007	143,876	13,749	86,009	146,262	390,903

1/ Believed to include a substantial volume of Soviet origin which was transshipped from East Germany.
2/ Includes 32,865 tons from Yugoslavia.
3/ Includes pumpkinseed.
4/ Not available.
5/ Less than .5 ton.
6/ January-September.

FISH OIL AVAILABILITIES DROP SHARPLY IN 1973 SOME RECOVERY LIKELY IN 1974

World production of fish oil, including fish liver oil, in calendar 1973 is estimated at 720,000 metric tons—187,000 below last year's reduced volume. This year's small volume is 420,000 tons below the record 1971 output and 475,000 tons below the projected 1960-72 linear trend estimate.

Virtually all of this year's decline is in the major producer-exporter countries—chiefly Peru. The decline in Peru's fish oil output reflects the critical shortage of anchovies as well as the sharp reduction in the oil extraction rate.

In 1973, world net exports of fish oil are estimated at only 375,000 tons—288,000 tons below the 1972 volume and the smallest since 1964. The estimated decline is equal to the oil fraction of 60 million bushels of soybeans. Measured as a deviation from the long-term trend projection, world fish oil exports in 1973 are down by 384,000 tons or the oil fraction of more than 80 million bushels of soybeans.

In 1974, there are prospects for some recovery in world production and exports of fish oil. Production could rise to 840,000 tons—120,000 above the indicated 1973 volume—if Peru achieves her 6-million ton catch target. This also assumes the oil extraction rate for Peruvian anchovies continues to be sharply depressed and unchanged from the 2.5 percent level indicated for this year. The oil extraction rate indicated for 1974 is substantially below the 1965-73 linear trend projection of 4.1 percent.

If some recovery in 1974 fish oil production materializes as expected, world net exports of fish oil could easily rise to 450,000 tons—75,000 tons above this year's projected volume.

During the 1960-72 period, world fish oil production trended upward by 49,100 tons of which 32,600 tons or two-thirds was in the five major producer-exporter countries (Peru, Norway, the United States, South Africa, and Iceland).

World exports of fish oil during the 1960-72 period grew by 36,700 tons annually. The major producer-exporters accounted for 28,200 of the total. About three-fourths of the growth in world fish oil production moved into export. Among the major producer-exporters, nearly 87 percent of the output expansion was exported, while domestic consumption in these five countries grew by only 4,400 tons per year.

Annual changes in fish oil production and exports for the major producer-exporter countries and the world together with deviations from the 1960-72 linear trends are as follows in 1,000 metric tons:

Item and year	Major producer-exporter [1]		World	
	Production	Exports	Production	Exports
Change from previous year:				
1960-72 trend	+ 33	+ 28	+ 49	+ 37
1970	+ 36	- 83	+ 64	- 60
1971	+ 99	+ 67	+102	+ 80
1972	-204	+ 1	-233	+ 23
1973	-189	-287	-187	-288
1974	+110	+ 75	+120	+ 75
Deviations from 1960-72 trends:				
Standard error	+ 95	+ 69	+107	+ 70
1970	- 29	- 84	- 9	- 89
1971	+ 38	- 46	+ 43	- 46
1972	-199	- 73	-239	- 59
1973	-420	-388	-475	-384
1974	-343	-341	-404	-346

[1] Includes Peru, Norway, United States, South Africa, and Iceland.

In view of the sharply below trend output and exports resulting from the continuing anchovy scarcity off the West Coast of South America as well as fishing restrictions and quotas in many other areas, the prospects for future growth in world production and exports of fish oil could be limited to something less than past growth trends.

This year is unique in that the estimated decline in exports at 288,000 tons will exceed the decline in production by about 100,000 tons. This is the result of the major producer-exporter countries expanding their exports in calendar 1972 in the face of a sharp reduction in output thereby reducing stocks. Because of such stock change, as well as variations in domestic consumption, annual variations in production in the major producer-exporter countries during the 1960-72 period explained only 80 percent of the annual variations in net exports with a standard error of 56,500 tons. This indicates that in 2 out of 3 years, the predicted volumes of net exports based on production as the dependent variable were within 56,500 tons above or below the actual net export volume.

In an attempt to more accurately predict aggregate net exports of fish oil from the major producer-exporter countries, we have found it necessary to derive a series of annual data on exportable supplies—stocks plus production less domestic disappearance. Acutal domestic disappearance is not known, but is presumed to vary far less on an annual basis than year-to-year changes in production. Therefore, a sharp change in output is believed to result in more of a stock change than a change in domestic disappearance. Because changes in domestic disappearance are not easily measured, linear trend estimates have been used with the assumption that unexported residual output during the 1960-72 period was consumed. Year-to-year changes in residual were assumed to represent stock changes. The stock data were adjusted to indicate a zero volume of exportable stocks following the maximum draw down period.

Annual exportable fish oil supplies for the 1960-72 period were correlated with actual net exports for the same period. Annual variations in the derived estimates of exportable supplies explained 91 percent of the annual variations in exports. The standard error of estimate was 38,500 tons.

For 1973, the calculated volume of net exports by the major producer-exporter countries is 274,000 tons. The actual volume of net exports is not expected to reach the predicted volume due to the fact that Peru's exports will likely drop significantly below the calculated volume.

During the January-June period this year, U.S. fish oil production amounted to 27,970 tons compared with 30,160 tons in the first half of 1972. This year U.S. exports through June amounted to 13, 650 tons against 14,150 in the same period in 1972.

In mid-July, prices for Peruvian semi-refined fish oil, c.i.f. Europe rose to 18.7 cents per pound—up 3.6 cents from the June average and more than double the 7.9-cent level of a year ago. Based on the sharp rise in prices for certain other major oils and fats in early August, such as soybean, palm, and tallow, fish oil prices, if quoted, would for the first time have reached 20 cents per pound. During the January 1971-July 1973 period monthly price variations in palm oil explained 81 percent of the variation in monthly fish oil prices with a standard error of 1.1 cent per pound. The substantial increase in prices reflects the fact that world production of oils and fats in calendar 1973 is now estimated at only 41.8 million metric tons—270,000 below last year and 1.2 million tons below the projected 1960-72 trend. Key factors in this decline have been reduced output of Peruvian fish oil, Philippine copra, Soviet sunflowerseed, Indian peanuts, as well as a significant drop in world output of lard and tallow and greases.

Fish Oil: Production and exports by major producer-exporters and world, annual 1960-73
(In 1,000 metric tons)

Item and year	Peru	Norway	United States	South Africa	Iceland	Total	Other	World
Production: 1/								
1960	48	70	93	44	31	286	176	462
1961	119	77	115	60	46	417	185	602
1962	151	68	112	60	68	459	210	669
1963	155	65	83	48	55	406	210	616
1964	203	90	80	70	91	534	225	759
1965	125	178	88	59	104	554	232	786
1966	147	238	74	51	130	640	249	889
1967	292	337	54	65	74	822	292	1,114
1968	292	243	78	125	20	758	350	1,108
1969	248	211	76	100	13	648	326	974
1970	311	188	93	80	12	684	354	1,038
1971	409	190	119	55	10	783	357	1,140
1972 2/	220	210	86	50	13	579	328	907
1973 3/	50	195	75	55	15	390	330	720
1974 4/	150	200	80	55	15	500	340	840
Exports: 1/		(5/)	(5/)					
1960	35	9	57	38	49	188	34	222
1961	102	42	49	52	32	277	21	298
1962	151	28	50	45	66	340	28	368
1963	125	42	112	32	65	376	37	413
1964	111	27	60	45	62	305	56	361
1965	137	133	42	35	89	436	42	478
1966	87	187	27	25	133	459	51	510
1967	196	245	30	25	79	575	84	659
1968	323	144	26	106	33	632	105	737
1969	141	223	85	62	36	547	73	620
1970	200	127	68	57	12	464	96	560
1971	276	123	98	25	9	531	109	640
1972 2/	293	120	82	21	16	532	131	663
1973 3/	10	125	70	25	15	245	130	375
1974 4/	80	125	75	25	15	320	130	450

1/ Includes fish liver oil. 2/ Preliminary. 3/ Forecast. 4/ Net exports includes hardened fish oil. 5/ Net exports.

Fish Oil: Estimated aggregate supply and distribution in the major producer-exporter countries 1/, annual 1960-73 with 1974 forecast

(In 1,000 metric tons)

Calendar year	Estimated minimum carry-in stocks 2/	Production	Estimated minimum supply	Calculated residual 3/ disappearance	Estimated exportable supply	Net exports: Actual	Net exports: Calculated 4/	Estimated minimum carry-out stocks
1960	122	286	408	121	287	188	239	99
1961	99	417	516	125	391	277	315	114
1962	114	459	573	129	444	340	353	104
1963	104	406	510	134	376	376	304	0
1964	0	534	534	138	396	305	318	91
1965	91	554	645	142	503	436	396	67
1966	67	640	707	147	560	459	437	101
1967	101	822	923	151	772	575	592	197
1968	197	758	955	155	800	632	612	168
1969	168	648	816	160	656	547	507	109
1970	109	684	793	164	629	464	488	165
1971	165	783	948	169	779	531	597	248
1972	248	579	827	173	654	532	506	122
1973 5/	122	390	512	177	335	245	274	90
1974 6/	90	500	590	182	408	320	327	88

1/ Includes Peru, Norway, the United States, South Africa, and Iceland. 2/ Derived on the basis of calculated stock changes from production less exports and calculated domestic disappearance. 3/ Calculated on the basis of a linear trend of the annual unexported production. 4/ Based on least squares regression for the 1960-72 period, where calculated exports equal the estimated minimum supply multiplied by .7269 plus 30.3. Annual variations in estimated exportable supplies explained 91 percent of the annual variations in exports. In roughly two years out of three during the 1960-72 period, the calculated export estimate was within 38,500 tons of the actual export volume. 5/ Partly estimated. 6/ Forecast.

Peruvian Fishoil: Estimated supply and distribution

Year	Fish catch	Oil extraction rate	Production	Stocks January 1	Supply	Apparent domestic consumption	Exports
	1,000 MT	Percent	1,000 MT	1,000 MT	1,000 MT	1,000 MT	1,000 MT
1965.....	7,242	1.7	125	69	194	33	137
1966.....	8,530	1.7	147	24	171	35	87
1967.....	9,825	3.0	292	49	341	37	196
1968.....	10,263	2.9	292	108	400	42	323
1969.....	8,960	2.8	248	35	283	45	141
1970.....	12,383	2.5	311	97	408	78	200
1971.....	10,274	4.0	409	130	539	113	276
1972.....	4,447	5.0	220	150	370	51	293
1973 1/...	2,000	2.5	50	26	76	56	10
1974 2/...	6,000	2.5	150	10	160	60	80

1/ Partly estimated. Assumes that fishing will not be resumed until March 1974.
2/ Forecast based on the 1974 catch target of 6 million tons of anchovies.

Compiled from Sociedad Nacional de Pesqueria and other sources.

Fish Oil (including fish liver oil): Production by major producing countries and estimated world total, annual 1965-72

(In 1,000 metric tons)

Continent and country	1965	1966	1967	1968	1969	1970	1971	1972 1/
North America:								
Canada	27.0	26.5	29.3	39.7	37.8	31.4	32.0	21
United States	87.5	73.8	54.4	77.8	76.2	93.3	118.8	86
Other 2/	1.9	3.9	4.5	4.5	1.2	4.9	4.1	4
Total	116.4	104.2	88.2	122.0	115.2	129.6	154.9	111
South America:								
Chile	10.0	22.2	10.4	37.0	22.6	23.3	54.0	10
Peru	124.9	146.7	291.8	292.0	248.0	311.0	409.0	220
Other 2/	3.9	4.1	5.5	5.3	5.9	5.7	6.0	6
Total	138.8	173.0	307.7	334.3	276.5	340.0	469.0	236
Europe:								
Denmark	39.7	37.0	63.0	70.2	52.8	51.2	56.2	53
Germany, West	20.0	19.6	19.2	18.0	16.8	15.7	12.4	15
Iceland	103.6	130.5	73.9	20.4	13.2	12.2	10.0	13
Norway	178.2	237.9	337.4	243.2	210.6	188.3	190.3	210
Portugal	9.2	8.2	11.2	9.1	7.8	8.0	11.0	11
United Kingdom	13.1	12.1	14.0	14.6	15.9	9.1	10.2	10
Other 2/	14.7	17.7	21.9	22.4	16.3	20.4	25.1	24
Total	378.5	463.0	540.6	397.9	333.4	304.9	315.2	336
USSR	44.0	49.0	55.0	57.0	60.0	60.0	63.0	65
Africa:								
Morocco	6.0	5.4	8.3	10.9	8.2	6.0	3.0	6
Angola	5.6	4.6	4.4	3.3	9.0	10.8	8.1	10
South Africa 3/	59.3	50.7	65.4	125.2	99.6	80.0	55.4	50
Total	70.9	60.7	78.1	139.4	116.8	96.8	66.5	66
Asia:								
Japan	34.5	36.3	42.0	55.3	70.1	104.3	68.5	90
Other 2/	3.2	2.4	2.3	2.0	1.9	2.5	2.9	3
Total	37.7	38.7	44.3	57.3	72.0	106.8	71.4	93
World total	786.3	888.6	1,113.9	1,107.9	973.9	1,038.1	1,140.0	907

1/ Preliminary. 2/ Includes estimates for minor producing countries. 3/ Includes South West Africa and production from factory ships.

Foreign Agricultural Service. Prepared or estimated on the basis of official statistics of foreign governments, other foreign source materials, reports of U.S. Agricultural Attaches and Foreign Service Officers, results of office research and related information.

Fish Oil (Including fish liver oils): World net exports, annual 1964-1972
(In 1,000 metric tons)

Continent and country	1964	1965	1966	1967	1968	1969	1970	1971	1972 1/
Gross Exports									
North America:									
Canada	14	7	3	5	4	10	20	8	5
United States	69	47	35	35	30	89	72	104	88
Total	83	54	38	40	34	99	92	112	93
South America:									
Argentina	1	1	2	2	(2/)	1	1	1	(2/)
Chile	14	8	16	10	28	16	16	37	9
Peru	111	137	87	196	323	141	200	276	293
Total	126	146	105	208	351	158	217	314	302
Europe:									
Belgium-Luxembourg	1	1	1	1	1	1	1	1	1
France	3	2	3	2	3	2	4	5	4
Germany, West	15	16	16	20	15	11	6	4	4
Italy	(2/)	(2/)	(2/)	(2/)	(2/)	(2/)	(2/)	(2/)	(2/)
Netherlands 3/	2	2	4	2	3	5	4	3	2
Total EC	21	21	24	25	22	19	15	13	11
Denmark	31	52	35	64	58	30	28	18	39
Faroe Islands	1	2	3	7	7	3	6	5	5
Iceland	62	89	133	79	33	36	12	9	16
Norway 4/	110	149	208	268	184	251	160	152	177
Portugal	8	10	9	11	11	8	9	7	8
Spain	(2/)	(2/)	1	1	1	2	3	1	1
Sweden	18	14	12	16	13	14	14	17	10
United Kingdom	5	4	5	5	7	9	9	7	0
USSR	1	1	1	1	(2/)	(2/)	(2/)	(2/)	(2/)
Total	257	342	431	477	336	372	256	229	267
Africa:									
Angola	7	5	5	5	4	8	12	8	19
Morocco	5	1	5	8	11	8	5	3	4
South Africa 5/	45	35	25	25	106	62	57	25	21
Total	57	41	35	38	121	78	74	36	44
Asia:									
Japan	2	1	1	3	2	2	15	29	34
Total	2	1	1	3	2	2	15	29	34
World total	525	584	610	766	844	709	654	720	740
Gross Imports									
Canada	(2/)	4	5	4	2	2	2	2	2
Mexico	1	1	1	1	1	2	1	1	1
United States	9	5	8	5	4	4	4	6	6
Columbia	11	14	32	17	33	38	21	35	20
Belgium-Luxembourg	13	17	19	23	16	17	13	17	21
France	15	33	27	31	22	30	28	25	36
Germany, West	68	71	78	99	158	134	124	136	148
Italy	6	4	5	6	10	6	4	3	3
Netherlands 3/	59	63	78	123	137	112	102	119	120
Total EC	161	188	207	282	343	299	271	300	328
Denmark	28	45	29	30	23	15	17	8	10
Hungary	3	4	5	5	6	6	6	5	6
Norway 4/	83	16	21	23	40	28	33	29	55
Poland	8	15	14	7	18	25	13	6	8
Spain	4	4	7	8	(2/)	4	1	5	8
Sweden 4/	35	46	33	42	41	35	36	39	38
United Kingdom	101	153	164	265	189	181	176	200	181
Korea, Republic of	0	(2/)	1	3	1	1	2	2	3
Japan	(2/)	1	6	3	6	7	1	1	1
Total imports	444	496	533	695	707	647	584	639	667
Net exports	361	478	510	659	737	620	560	640	663

1/ Preliminary. 2/ Less than 500 tons. 3/ Excludes sizable quantities of hardened fish oils exported annually which are not separately classified in trade returns. 4/ Includes hardened fish oils. 5/ Including the territory of South West Africa. 6/ Including factory ships.

Foreign Agricultural Service. Prepared or estimated on the basis of official statistics of foreign governments other foreign source materials, reports of U.S. Agricultural Attaches and Foreign Service Officers, results of office research and related information.

Prices for fish oil and selected oils and fats with price spread comparisons, annual 1965-72 and monthly 1972-73

(In U.S. cents per pound)

Period	Fish oil price 1/	Lard price 3/	Spread	Tallow price 2/	Spread	Sunflower oil price 4/	Spread	Rapeseed oil price 4/	Spread	Soybean oil price 4/	Spread	Palm oil price 5/	Spread
1965	9.2	11.4	3.5	7.9	.6	11.6	3.4	11.5	2.1	10.4	2.5	10.9	2.6
1966	8.9	12.8	3.9	8.3	.6	11.7	2.8	11.1	2.2	11.8	2.9	10.7	1.8
1967	5.8	9.3	3.5	6.4	.6	9.6	3.8	9.4	3.6	9.8	4.0	10.2	4.4
1968	4.5	7.7	3.2	5.8	1.3	7.7	3.2	7.3	2.8	8.1	3.6	7.7	3.2
1969	6.8	10.0	3.2	7.5	.7	9.6	2.8	8.4	1.6	---	---	8.1	1.3
1970	11.2	12.5	1.3	9.2	2.0	15.1	3.9	11.9	.7	17.2	6.0	11.6	.4
1971	9.9	11.8	1.9	8.9	1.0	17.0	7.1	12.2	2.3	14.1	4.1	12.0	2.1
1972	7.9	10.9	3.0	8.1	.2	14.8	6.9	10.2	2.3	10.9	3.0	9.8	1.9
1972:													
January	7.7	10.2	2.5	7.5	.2	14.6	6.9	10.7	3.0	11.5	3.8	10.1	2.4
February	6.9	11.2	4.3	7.4	.5	14.0	7.1	10.3	3.4	11.0	4.1	8.4	1.5
March	6.7	10.4	3.7	7.4	.7	14.7	8.0	3/	4.4	11.5	4.8	9.7	3.0
April	7.1	10.5	3.4	7.9	.8	16.8	9.7	10.7	---	11.9	4.8	10.3	3.2
May	7.7	10.5	2.8	7.8	.1	16.6	8.9	11.0	3.6	11.4	3.7	10.3	2.6
June	8.1	10.2	2.1	7.9	.2	15.5	7.4	9.4	1.3	10.5	2.4	9.7	1.6
July	7.8	10.9	3.1	8.1	.3	14.6	6.8	3/	---	10.2	2.4	9.7	1.9
August	8.1	11.0	2.9	8.2	.1	14.2	6.1	9.5	1.4	10.1	2.0	10.0	1.9
September	9.1	11.2	2.1	8.8	.3	14.2	5.1	9.8	.7	10.3	1.2	10.1	1.0
October	---	11.6	---	8.7	---	13.8	---	3/	---	10.4	---	9.9	---
November	---	12.1	---	8.8	---	14.1	---	3/	---	11.0	---	9.9	---
December	9.5	11.0	1.5	8.8	.7	14.8	5.3	3/	---	10.7	1.2	9.7	1.0
1973:													
January	9.7	11.8	2.1	9.1	.6	14.8	5.1	---	---	11.1	1.4	9.7	---
February	11.8	15.8	4.0	9.3	2.5	15.4	3.6	---	---	14.5	2.7	12.0	.2
March	11.1	14.9	3.8	11.7	.6	15.7	4.6	---	---	14.4	3.3	12.6	1.5
April	12.5	14.7	2.2	12.3	.2	16.6	4.1	---	---	15.8	3.3	13.2	.7
May	13.8	18.6	4.8	15.2	1.4	17.3	3.5	---	---	16.9	3.1	14.9	1.1
June	15.1	---	---	19.3	4.2	20.9	5.8	---	---	22.4	7.3	16.9	1.8
July	---	---	---	20.2	---	26.2	---	---	---	27.2	---	---	---

1/ Peruvian semi-refined, c.i.f. European ports.
2/ North American bleachable, c.i.f. European ports.
3/ American bulk U.K. ports.
4/ Any origin, crude, ex-tank, Rotterdam.
5/ Malayan, 5% bulk, c.i.f. European ports.

WORLD SUGAR TRADE DOWN SLIGHTLY IN 1972

World sugar exports and imports both decreased slightly in 1972 from a year earlier. Instrumental in the decrease was the harvesting of two successive short world crops, compounded by increased consumption in producing countries.

World exports declined from 21.5 million metric tons in 1971 to 21.2 million in 1972. In 1965-69, these exports averaged 19.2 million tons. Exports from North America and Asia decreased in 1972, compared with 1971. All other geographic areas increased, but not enough to offset the decrease.

Cuba was the big factor in the decrease in North America's sugar exports. Cuba's drought-reduced 1971-72 harvest was the smallest for several years and export availabilities were limited. The USSR's sugar exports dropped off sharply in 1972 because of short supplies caused by reduced output and Cuba's inability to supply its usual amount of sugar to the USSR. Brazil nearly doubled its exports in 1972 from a year earlier. Australia and South Africa also increased their sugar exports in 1972.

World sugar imports declined from 20.7 million tons in 1971 to 20.6 million in 1972. The USSR's imports increased in 1972, although much of this sugar had to be purchased on the world market. Imports by the United States, under the quota system of the U.S. Sugar Act, were slightly less in 1972, compared with 1971. Japan's imports increased from 2.4 million tons in 1971 to 2.8 million tons in 1972, as the upward trend in consumption continued.

Sugar, centrifugal, (raw value): Imports, average 1965-69, annual 1971 and 1972

(In thousands of metric tons)

Continent and country	Average 1965-69	1971	1972 1/
North America			
Canada	860	899	907
United States	4,096	4,821	4,750
Other 2/	67	42	40
Total North America	5,023	5,762	5,697
South America			
Chile	188	195	205
Uruguay	52	31	53
Other 2/	1	2	1
Total South America	241	228	259
Europe			
Austria	2	3/	3/
Belgium and Luxembourg	35	8	4
Denmark	17	15	6
Finland	184	210	214
France	123	108	125
Germany, West	269	177	125
Greece	55	22	89
Iceland	12	11	10
Ireland	64	42	31
Italy	181	538	579
Malta	18	20	15
Netherlands	168	15	39
Norway	172	183	171
Portugal	183	205	252
Spain 4/	231	78	100
Sweden	123	163	112
Switzerland	248	260	247
United Kingdom	2,164	2,134	2,163
Total West Europe	4,249	4,189	4,282
Bulgaria	249	269	168
Czechoslovakia	213	197	143
Germany, East	243	433	288
Hungary	24	198	145
Poland	26	43	22
Romania	25	129	80
Yugoslavia	125	155	300
Total East Europe	905	1,424	1,146
Total Europe	5,154	5,613	5,428
USSR (Europe and Asia)	1,942	1,536	1,924

Continent and country	Average 1965-69	1971	1972 1/
Africa			
Algeria	246	261	207
Ghana	72	80	54
Kenya	49	77	111
Libya	53	57	79
Morocco	227	246	222
Nigeria	72	142	118
Sierra Leone	25	26	22
Sudan	135	242	93
Tanzania	2	29	54
Tunisia	80	117	155
United Arab Republic	112	52	76
Other 2/	310	348	360
Total Africa	1,383	1,677	1,551
Asia			
Afghanistan	54	59	60
China, Mainland	494	464	810
Cyprus	16	18	18
Hong Kong	144	118	84
Indonesia	53	175	24
Iran 5/	219	94	103
Iraq	289	336	238
Israel	103	139	101
Japan	1,913	2,427	2,777
Jordan	78	50	40
Korea, South	126	260	22
Lebanon	46	71	29
Malaysia	292	330	259
Pakistan	82	3/	196
Singapore	167	141	138
Southern Yemen, Rep. of	52	48	28
Sri Lanka (Ceylon)	261	312	222
Syria	78	217	102
Vietnam, South	154	325	188
Other 2/	119	117	100
Total Asia	4,740	5,701	5,539
Oceania			
New Zealand	139	171	155
Other	19	20	20
Total Oceania	158	191	175
Total World	18,641	20,708	20,573
U. S. Offshore Trade	1,641	1,112	1,144
Puerto Rico 6/	0	1	0
Other 2/	1	4	2
Total	1,642	1,117	1,146

1/ Preliminary. 2/ Includes trade of other countries not shown separately. 3/ Less than 500 tons. 4/ Canary Islands, Ceuta, and Melilla considered provinces of Spain after January 1, 1953. 5/ Iranian calendar year. 6/ Sugar and related products.

Foreign Agricultural Service. Prepared or estimated on the basis of official statistics of foreign governments, other foreign source materials, reports of U.S. agricultural attaches and foreign service officers, results of office research and related information.

SUGAR, CENTRIFUGAL, RAW VALUE: Exports, average 1965-69, annual 1971 and 1972
(In thousands of metric tons)

Continent and country	Average 1965-69	1971	1972 1/
North America			
British Honduras	48	60	72
Canada	19	12	18
Costa Rica	55	83	76
El Salvador	49	71	134
Guatemala	50	70	73
Honduras	8	10	12
Mexico	460	546	540
Nicaragua	40	78	91
Panama	25	41	37
United States	2	1	1
Caribbean			
Antigua	6	8	0
Barbados	163	126	118
Cuba	4,969	5,511	4,139
Dominican Republic	588	1,011	1,098
Guadeloupe	55	70	65
Haiti	24	21	22
Jamaica	378	202	280
St. Kitts	34	23	24
Trinidad and Tobago	192	174	191
Other 2/	1	0	0
Total North America	7,166	8,118	6,991
South America			
Argentina	74	121	94
Brazil	968	1,191	2,054
Colombia	155	161	203
Ecuador	67	88	86
Guyana	310	362	320
Peru	400	432	481
Venezuela	34	36	98
Other 2/	12	8	10
Total South America	2,020	2,399	3,346
Europe			
Belgium and Luxembourg	157	239	434
Denmark	72	64	68
France	708	1,168	1,378
Germany, West	49	56	286
Ireland	16	15	16
Netherlands	14	129	118
Switzerland	6	9	11
United Kingdom	288	284	330
Other 2/	48	69	72
Total West Europe	1,358	2,033	2,713
Bulgaria	62	32	35
Czechoslovakia	390	350	300
Germany, East	163	100	126
Hungary	52	2	0
Poland	212	86	332
Romania	100	23	10
Yugoslavia	17	61	35
Total East Europe	996	654	838
Total Europe	2,354	2,687	3,551
USSR (Europe and Asia)	1,089	1,401	64
Africa			
Angola	24	9	10
Malagasy Republic	67	74	38
Mauritius	571	489	650
Mozambique	134	207	80
Reunion	244	100	75
Rhodesia	110	90	105
South African Rep. 3/	734	828	1,168
Swaziland	125	150	189
Uganda	7	0	0
Other 2/	59	140	130
Total Africa	2,075	2,087	2,445
Asia			
China, Mainland	337	116	50
Taiwan	706	523	520
Hong Kong	23	41	17
India	233	323	104
Indonesia	25	0	0
Philippines	970	1,422	1,240
Thailand	34	145	139
Turkey	82	29	122
Other 2/	100	48	52
Total Asia	2,510	2,647	2,244
Oceania			
Australia 4/	1,636	1,762	2,298
Fiji	309	354	290
Total Oceania	1,945	2,116	2,588
Total World	19,159	21,455	21,229
U. S. Offshore Trade	5/	0	1
Puerto Rico	561	131	135
Hawaii	1,079	986	1,010
Virgin Islands	2	0	0
Total	1,642	1,117	1,146

1/ Preliminary. 2/ Includes trade of other countries not shown separately. 3/ Beginning 1965, Swaziland excluded. 4/ Crop year ending May of year shown. 5/ Less than 500 tons.

Foreign Agricultural Service. Prepared or estimated on the basis of official statistics of foreign governments, other foreign source materials, reports of U.S. agricultural attaches and foreign service officers, results of office research and related information.

U.S. GRAIN EXPORTS SET RECORD IN FISCAL 1973

Total U.S. exports of grain and products (grain equivalent) were 70 million metric tons during July 1972-June 1973, compared to 39.8 million tons the previous year. This is an increase of 75.6 percent, a new record and the greatest increase in any single year. A summary of U.S. grain exports for 1971-72 and 1972-73 (July-June) in 1,000 metric tons is as follows:

	1971-72	1972-73
Wheat and Flour	16,907	31,740
Wheat (mil. bu.)	(576)	(1,126)
Flour (mil. bu)	(45)	(40)
Corn	16,698	28,998
Oats	332	285
Barley	1,017	1,281
Sorghum	2,641	4,858
Subtotal	20,688	35,422
Rye	50	245
Rice	1,645	1,866
Products (grain equiv.)		
Wheat (except flour)	263	399
Corn meal, starch, hominy & grits	218	193
Oatmeal	20	57
Barley Malt	58	87
Subtotal	559	716
Total	39,849	69,989

Wheat shipments of 1,126 million bushels were 95.6 percent greater than during fiscal 1972. The principal factors behind the large increase were huge shipments of 348 million bushels to the Soviet Union (none for 1971-72); 43 million bushels to East European countries (1 mil. in 1971-72); 22 million bushels to the People's Republic of China (none in 1971-72); and 124 million bushels to Japan, compared to 81 million during 1971-72. Also, the relative freedom of the various shipping ports from strikes made it more accessible to move these large quantities. Shipments expanded to many other countries, particularly the EC-6 in Western Europe, Bangladesh, Indonesia, and Taiwan in Asia; and Mexico, Brazil, and Peru in the Western Hemisphere. The only area to receive less shipments was Africa, led by Morocco and Algeria. Other major decreases occurred in shipments to Colombia, the United Kingdom, India, Iran, and the Republic of Korea.

Flour exports at 40 million bushels continued to decline by 12 percent.

Feedgrain exports at 35.7 million metric tons (including products) were 70.3 percent above the 1971-72 level of 21 million. Corn shipments reached a record 29.2 million tons, 71.7 percent above the previous high of 17 million tons during 1965-66. Sorghum exports increased by 83.9 percent, but were far from the record year of 1966-67 (7.1 mil. tons) and 1965-66 (6.2 mil. tons). Barley trade increased by 27.3 percent, but oats exports declined by 2.8 percent.

The main reason for the huge increase in feedgrains (primarily corn) lies in the steadily increasing import requirements of many countries as diets were upgraded, also unusually large purchases by some countries resulted from poor internal harvests. Japan reemerged as the biggest outlet at 8.4 million tons of which 4.7 million were corn shipments. Other significant markets were the EC-6 (8.9 mil. tons), Spain (2 mil. tons) and the United Kingdom (1.6 mil. tons). A total of 827,000 tons went to the People's Republic of China.

Rye exports of 245,000 tons were four times greater than during 1971-72. Of this total, 204,000 tons were shipped to the Soviet Union.

Rice shipments of 1.87 million tons were 13.4 percent above the total of last year. Greater exports went to the EC-6, Khmer Republic (Cambodia), Republic of Korea, and South Vietnam, but shipments to Bangladesh and Indonesia were less than one-half of the 411,000 tons shipped to those countries during 1971-72.

WHEAT AND FLOUR 1/: U.S. exports by country of destination, July-June 1971 and July-June 1972-73

Destination	July-June 1971-72				July-June 1972-73			
	Wheat	Flour 2/	Total		Wheat	Flour 2/	Total	
	1,000 Bushels	1,000 Bushels	1,000 Bushels	1,000 Metric Tons	1,000 Bushels	1,000 Bushels	1,000 Bushels	1,000 Metric Tons
Western Hemisphere:								
Canada	1/	20	20	1	1/	21	21	1
Mexico	14,763	23	14,786	402	24,581	7	24,588	669
Costa Rica	1,933	33	1,966	54	2,656	64	2,720	74
El Salvador	1,673	66	1,739	47	2,262	49	2,311	63
Guatemala	2,424	103	2,527	69	2,270	175	2,445	67
Other Central America	5,205	335	5,540	151	4,824	688	5,512	150
Dominican Republic	3,249	125	3,374	92	2,601	152	2,753	75
Haiti	--	43	43	1	74	87	161	4
Jamaica	867	947	1,814	49	1,683	1,297	2,980	81
Trinidad and Tobago	2,261	5	2,266	62	2,789	89	2,878	78
Other Bermuda and Caribbean	815	494	1,309	36	540	300	840	23
Argentina	--	--	--	--	--	--	--	--
Bolivia	2,156	1,462	3,618	98	752	57	809	22
Brazil	16,426	568	16,994	462	43,973	812	44,785	1,219
Chile	--	247	247	7	334	296	630	17
Colombia	15,574	554	16,128	439	10,215	782	10,997	299
Ecuador	3,974	143	14,117	112	4,534	210	4,744	129
Guyana	1,385	31	1,416	39	1,736	14	1,750	48
Peru	16,510	328	16,838	458	20,524	172	20,696	563
Surinam	518	174	692	19	352	104	456	12
Uruguay	301	6	307	8	4,365	4	4,369	119
Venezuela	23,746	37	23,783	647	23,569	46	23,615	643
Other South America	1,029	38	1,067	29	1	40	41	1
Total	114,809	5,782	120,591	3,282	154,635	5,466	160,101	4,357
Western Europe:								
EC:								
Belgium-Luxembourg	6,537	4/	6,537	178	6,221	--	6,221	169
France	2,497	--	2,497	68	7,218	--	7,218	196
Germany, West	5,951	2	5,953	162	22,986	--	22,986	626
Italy	3,096	--	3,096	84	8,701	--	8,701	237
Netherlands	21,157	402	21,559	587	35,350	282	35,632	970
Total	39,238	404	39,642	1,079	80,476	282	80,758	2,198
Other Western Europe:								
Iceland	7	214	221	6	8	315	323	9
Norway	3,176	2	3,178	87	3,414	3	3,417	93
Portugal	6,301	23	6,324	172	3,794	16	3,810	103
Spain	4	--	4	4/	2	--	2	4/
Switzerland	4,887	--	4,887	133	5,539	--	5,539	151
United Kingdom	25,493	17	25,510	694	19,908	7	19,915	542
Others	326	85	411	11	5,454	52	5,506	150
Total	40,194	341	40,535	1,103	38,119	393	38,512	1,048
Eastern Europe:								
Poland	--	--	--	--	22,407	--	22,407	610
Romania	--	--	--	--	1,051	--	1,051	29
Yugoslavia	1,235	--	1,235	34	12,566	2	12,568	342
Others	104	--	104	3	6,565	--	6,565	179
Total	1,339	--	1,339	37	42,589	2	42,591	1,159
Total Europe	80,771	745	81,516	2,219	161,184	677	161,861	4,405
U.S.S.R.	--	--	--	--	347,895	--	347,895	9,468
Asia:								
Bangladesh	5/ 11,175	--	11,175	304	27,362	--	27,362	745
China, Peoples Republic of	--	--	--	--	21,731	--	21,731	591
China, Republic of (Taiwan)	11,506	--	11,506	313	18,295	--	18,295	498
Cyprus	1,101	61	1,162	32	1,436	84	1,520	41
Hong Kong	1,152	27	1,179	32	1,923	21	1,944	53
India	27,814	117	27,931	760	18,046	335	18,381	500
Indonesia	4,460	2,224	6,684	182	17,457	726	18,183	495
Iran	21,607	4	21,611	588	18,482	2	18,484	503
Israel	13,088	3,094	16,182	440	12,955	2,356	15,311	417
Japan	80,646	3	80,649	2,195	124,086	7	124,093	3,377
Jordan	1,545	2,162	3,707	101	3	3,373	3,376	92
Khmer Republic	--	767	767	21	533	618	1,151	31
Korea, Republic of	62,726	1,742	64,468	1,745	55,477	4,071	59,548	1,621
Lebanon	4,331	1,282	5,613	153	2,638	480	3,118	85
Nansei and Nanpo Islands	608	149	757	21	--	--	--	--
Pakistan	5/ 32,915	4/	32,915	896	36,054	80	36,134	983
Philippines	14,767	694	15,461	421	15,632	1,091	16,723	455
Saudi Arabia	--	5,086	5,086	138	673	4,792	5,465	149
Sri Lanka	--	11,199	11,199	305	--	7,387	7,387	201
Syrian Arab Republic	8,527	--	8,527	232	--	--	--	--
Turkey	2,876	807	3,683	100	--	1,128	1,128	31
Vietnam, South	7,375	2,714	10,089	274	7,506	1,613	9,119	248
Others	8,192	278	8,470	231	3,652	359	4,011	109
Total	316,411	32,410	348,821	9,493	383,961	28,523	412,484	11,225
Africa:								
Algeria	17,297	--	17,297	471	14,975	--	14,975	408
Ghana	1,513	12	1,525	41	1,545	42	1,587	43
Guinea	--	916	916	25	--	655	655	18
Morocco	16,578	2,581	19,159	521	9,395	2,915	12,310	335
Nigeria	12,740	438	13,178	359	12,528	7	12,535	341
South Africa, n.e.c.	--	--	--	--	--	--	--	--
Sierra Leone	1,008	3	1,011	28	1,067	2	1,069	29
Tunisia	6,645	582	7,227	197	1,872	763	2,635	72
Zaire	2	1,300	1,302	35	515	160	675	18
Others	7,961	647	8,608	234	16,226	658	16,884	460
Total	63,744	6,479	70,223	1,911	58,123	5,202	63,325	1,724
Oceania	--	77	77	2	--	161	161	4
Unidentified Canadian Transhipments	--	--	--	--	20,463	--	20,463	557
World Total	575,735	45,493	621,228	16,907	1,126,241	40,029	1,166,270	31,740
Other Products	9,679	--	9,679	263	14,676	--	14,676	399
Grand Total	585,414	45,493	630,907	17,170	1,140,917	40,029	180,946	32,139

1/ Data includes shipments for relief. 2/ Grain equivalent. 3/ Transhipments through Canada have been included in data for countries of ultimate destination. 4/ Less than 500 metric tons. 5/ Exports to Bangladesh are included with Pakistan through April.

Foreign Agricultural Service
Grain and Food Division, CAB/BSS
August 1973

Source: Compiled from reports of the U.S. Department of Commerce.

FEED GRAINS 1/: U.S. exports to principal countries, July-June 1971-72 and July-June 1972-73
(In thousands of metric tons)

Destination	July-June 1971-72					July-June 1972-73				
	Corn 2/	Oats	Barley	Sorghum	Total	Corn 2/	Oats	Barley	Sorghum	Total
Western Hemisphere:										
Canada 3/	207	--	--	2	209	447	--	--	6	453
Mexico	15	7	4	84	110	433	2	27	185	647
Panama	14	1	4/	6	21	28	2	4/	4/	30
Other Central America	13	4/	--	1	14	132	--	1	1	134
Bermuda	3	4/	4/	--	3	1	4/	--	--	1
Dominican Republic	35	4/	--	4/	35	17	4/	--	4/	17
Jamaica	106	1	4/	7	114	118	2	--	4	124
Trinidad and Tobago	64	4/	--	--	64	71	4/	--	--	71
Other Bermuda and Caribbean	6	4/	--	3	9	17	--	--	--	17
Argentina	1	--	--	1	2	4/	--	--	4/	4/
Brazil	1	--	--	1	2	6	--	--	1	7
Chile	169	--	--	--	169	175	--	--	--	175
Colombia	13	4/	--	1	14	97	4/	39	21	157
Ecuador	--	--	--	--	--	5	4/	3	--	8
Peru	43	--	3	15	61	228	2	1	33	264
Surinam	7	--	--	1	8	12	--	--	1	13
Venezuela	1	1	1	274	277	105	1	--	365	471
Other South America	3	1	--	4/	4	234	1	--	4/	235
Total	701	11	8	396	1,116	2,126	10	71	617	2,824
Western Europe:										
EC:										
Belgium-Luxembourg	391	--	4/	43	434	508	1	--	--	509
France	7	--	--	1	8	4	4/	--	2	6
Germany, West	1,522	--	6	33	1,561	1,785	92	124	30	2,031
Italy	2,038	--	2	1	2,041	2,709	48	31	30	2,818
Netherlands	2,743	--	3	114	2,860	3,394	16	6	100	3,516
Total	6,701	--	11	192	6,904	8,400	157	161	162	8,880
Other Western Europe:										
Austria	29	--	--	--	29	4/	--	--	--	4/
Denmark	1	--	4	--	5	1	--	--	--	1
Finland	4	--	--	--	4	2	--	--	--	2
Greece	235	--	--	--	208	419	--	--	--	419
Iceland	7	--	--	--	7	2	--	--	--	2
Ireland	19	--	--	--	18	135	4/	--	3	138
Malta	5	--	--	--	5	6	--	3	--	9
Norway	37	--	--	--	37	92	--	--	76	168
Portugal	420	--	--	4/	420	480	--	13	84	577
Spain	376	--	4/	39	415	2,035	--	--	1	2,036
Sweden	4	--	--	--	4	3	--	--	19	22
Switzerland	81	4	4/	22	107	6	6	--	--	12
United Kingdom	1,253	--	--	36	1,289	1,566	4/	23	45	1,634
Others	4	--	--	--	4	--	--	--	--	--
Total	2,447	4	4	97	2,552	4,747	6	39	228	15,020
Eastern Europe:										
Czechoslovakia	52	--	33	--	85	18	--	16	--	34
Germany, East	327	--	--	--	327	--	--	--	--	--
Hungary	--	--	--	--	--	4/	--	--	4/	4/
Poland	313	--	22	--	335	525	--	59	--	584
Rumania	21	--	32	--	53	229	--	--	--	229
Yugoslavia	116	--	--	--	116	343	--	--	--	343
Total	829	--	87	--	916	1,115	--	75	4/	1,190
Total Europe	9,977	4	102	289	10,372	14,262	163	275	390	15,090
U.S.S.R.	1,994	314	642	--	2,950	3,526	37	171	1	3,735
Asia:										
China, Peoples Republic of	--	--	--	--	--	827	--	--	--	827
China, Republic of (Taiwan)	132	--	--	7	139	557	--	11	15	583
Cyprus	5	--	--	--	5	10	--	44	2	56
India	19	--	--	7	26	--	--	--	468	468
Iran	22	--	63	4/	85	54	--	--	--	54
Israel	105	--	--	596	701	109	--	--	593	702
Japan	2,567	3	--	1,265	3,835	5,592	62	91	2,665	8,410
Jordan	4/	--	--	--	4/	36	--	--	--	36
Korea, Republic of	458	--	167	4/	625	406	--	479	--	885
Lebanon	126	--	--	4/	126	51	--	--	4/	51
Pakistan	6	--	--	--	6	--	--	--	--	--
Philippines	157	--	--	--	157	50	4/	4/	4/	50
Singapore	4/	--	--	--	4/	95	--	--	--	95
Syrian Arab Republic	--	--	9	4/	9	--	--	--	4/	4/
Turkey	5	--	--	4/	5	4/	--	--	4/	4/
Vietnam, South	89	--	--	4/	89	80	--	--	4/	80
Others	9	--	26	--	39	216	1	--	1	218
Total	3,700	3	265	1,875	5,843	8,083	63	625	3,744	12,515
Africa:										
Angola	4/	--	--	--	4/	--	--	--	--	--
Canary Islands	84	--	--	--	84	110	--	--	--	110
Egypt (UAR)	55	--	--	4/	55	132	--	--	--	132
Gambia	--	--	--	2	2	--	--	--	--	--
Ghana	4/	--	--	4/	4/	4/	--	--	--	--
Senegal	3	--	--	45	48	4	--	--	1	1
Tanzania	115	--	--	--	115	1	--	--	35	39
Tunisia	14	--	--	--	14	24	--	--	--	1
Western Africa, n.e.c.	--	--	--	--	--	--	--	--	4/	24
Zambia	4/	--	--	--	4/	4/	--	--	--	--
Others	55	--	--	34	89	23	6	2	70	101
Total	326	--	--	81	407	294	6	2	106	408
Oceania	4/	--	--	--	4/	4/	--	--	4/	4/
Unidentified Canadian Transhipments	--	--	--	--	--	707	6	137	--	850
World Total	16,698	332	1,017	2,641	20,688	28,998	286	1,281	4,858	35,422
Total Grain Products 5/	218	20	58	--	296	173	57	87	--	317
Grand Total	16,916	352	1,075	2,641	20,984	29,171	342	1,368	4,858	35,739
Equivalent 1,000 bushels	665,929	24,251	49,374	103,971	1,148,404	21,562	62,832	191,250		

1/ Country breakdown includes grain only; grand total includes grain and products. 2/ Includes seed corn except sweet and exports for relief. 3/ Transhipments through Canada have been included in data for countries of ultimate destination. 4/ Less than 500 metric tons. 5/ Destination of exports of products will be published at a later date.

Foreign Agricultural Service
Grain and Feed Division, CAB/SBS
August 1973

Source: Compiled from reports of the U.S. Department of Commerce

RICE, MILLED 1/: U.S. exports to specified countries, July-June 1971-72 and July-June 1972-73
(In thousands of metric tons)

Destination	July-June 1971-72	July-June 1972-73
Western Hemisphere:		
Canada	61	60
British Honduras	1	2/
Bahamas	5	5
Barbados	2/	2/
Dominican Republic	2/	24
French West Indies	7	3
Jamaica	20	8
Netherlands Antilles	5	6
Trinidad and Tobago	2/	4
Chile	7	1
Venezuela	1	2/
Others	8	10
Total	115	121
Western Europe:		
EC:		
Belgium-Luxembourg	4	15
France	15	21
Germany, West	34	55
Netherlands	11	25
Total	64	116
Other Western Europe:		
Austria	2/	1
Denmark	1	4
Finland	1	1
Greece	1	1
Iceland	2/	2/
Ireland	2/	2/
Portugal	2/	2/
Sweden	5	5
Switzerland	14	12
United Kingdom	42	46
Others	1	2
Total	65	72
Total Europe	129	188
Asia:		
Bangladesh	75	4
Bahrain	2/	2/
Hong Kong	3	8
India	105	2/
Indonesia	336	191
Israel	9	9
Japan	2/	2/
Jordan	2/	2/
Asia (Continued):		
Khmer Republic	--	71
Korea, Republic of	387	562
Kuwait	5	2
Lebanon	1	1
Philippines	2/	54
Saudi Arabia	80	57
Turkey	--	11
Vietnam, South	104	381
Others	128	44
Total	1,233	1,395
Africa:		
Afars and Issas	2	2
French Indian Ocean Areas	2/	13
Ghana	2/	5
Guinea	15	2/
Ivory Coast	2	2
Liberia	41	25
Libya	3	2
Mauritius	2	2
Senegal	2/	5
Somalia Republic	2/	1
South Africa, Republic of	81	88
Western Portuguese Africa, n.e.c.	2	2
Zaire	2	1
Others	7	6
Total	157	154
Oceania:		
Australia	2/	2/
French Pacific Islands	2	2
Trust Territory of Pac. Islands	3	5
Others	6	1
Total	11	8
World Total	1,645	1,866

1/ Includes small quantity of rough rice milled equivalent.
2/ Less than 500 metric tons.

Foreign Agricultural Service
Grain and Feed Division, CAB/SSS
August 1973

Source: Compiled from reports of the U.S. Department of Commerce

RYE: U.S. exports by country of destination,
July-June 1971-72 and July-June 1972-73
(In thousands of metric tons)

Destination	July-June 1971-72	July-June 1972-73
Canada 1/	--	--
Germany, West	1	--
Netherlands	14	9
Yugoslavia	34	--
USSR	--	204
Others	1	--
Unidentified Countries--Can. T/S	--	32
World Total	50	245

1/ Transhipments through Canada have been included in data for countries.

Foreign Agricultural Service
Grain and Feed Division, CAB/SSS
August 1973

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